

CLAIM AMENDMENTS

In the claims please make the following amendments:

I claim:

1. (currently amended) A support system for supporting a body or a portion thereof, comprising:

a foam mattress, cushion, seating pad or similar support structure containing a plurality of tapered vacant regions and configured to reduce local stresses on a supported body, reduce cross contamination between a patient and a patient surroundings, and reduce the incidence of dust mites into said support system;

a bladder or membrane impervious to gases or other fluids, completely encasing said mattress, cushion, seating pad or similar support structure;

a passageway means, to allow and control the ingress and egress of a gas or other fluid into or out of said vacant regions, within or around the support structure encased by said bladder or membrane; and

a pressure/vacuum pump to allow continuous variation of the fluid pressure within said bladder or membrane.

2. (previously presented) A support system according to claim 1 wherein the support structure is a foam mattress in which portions of the support structure have been removed or omitted in one or more selected regions of the material, forming empty regions and the empty regions are a truncated cone or a bell-shaped region.

3. (currently amended) A support system for supporting a body or a portion thereof, comprising:

a foam mattress, cushion, seating pad or similar support structure containing a plurality of tapered vacant regions and configured to reduce local stresses on a supported body, reduce cross contamination between a patient and a patient surroundings, and reduce the incidence of dust mites into said support system;

a bladder or membrane impervious to gases or other fluids, completely encasing said mattress, cushion, seating pad or similar support structure;

a passageway means, to allow and control the ingress and egress of a gas or other fluid into or out of said vacant regions, within or around the support structure encased by said bladder or membrane; and

a pressure/vacuum pump to allow continuous variation of the fluid pressure within said bladder or membrane;

~~A support system according to claim 1 wherein one or more of the edges of the mattress, cushion, seating pad or other body support surface is undercut such that the edge tapers inward toward the bottom of the mattress, cushion, seating pad or body support element.~~

4. (previously presented) A support system according to claim 1 wherein said mattress, cushion, or seating pad is formed from a convoluted foam material.

5. (previously presented) A support system as in claim 1 wherein said mattress, cushion, or seating pad is formed from a convoluted foam material and said convoluted

foam material is inserted with smooth side upward and one or more cut-outs are made for the purpose of reducing local stresses on the body or sections thereof.

6. (previously presented) A support system according to claim 1 wherein the support structure provides for reduction of localized stresses by a modular construction technique using different types of foam material in selected regions to form a composite foam mattress.

7. (previously presented) A support system according to claim 1 wherein the support structure provides for reduction of localized stresses by a modular construction technique using different types of foam material encased in individual membranes in selected regions to form a composite foam mattress.

8. (previously presented) A support system according to claim 1 wherein said bladder is permanently sealed to prevent any escape or replacement of the fluid contained therein.

9. (previously presented) A support system according to claim 1 wherein said bladder is enclosed by a Ziploc or similar fastening means.

10. (currently amended) A device according to claim 1 wherein the support structure comprises a seat cushion and wherein said seat cushion contains provisions for localized

relief of stress comprising one or more tapered regions where material has been removed or omitted selectively from said seat cushion.

11. (previously presented) A support system as in claim 1 where a variable orifice is contained within the encasing membrane to control the rate of gaseous exchange from within the membrane to outside of the membrane and vice versa.

12. (currently amended) A support system for supporting a body or a portion thereof, comprising:

a foam mattress, cushion, seating pad or similar support structure containing a plurality of tapered vacant regions and configured to reduce local stresses on a supported body, reduce cross contamination between a patient and a patient surroundings, and reduce the incidence of dust mites into said support system;

a bladder or membrane permeable or semi-permeable to gases or other fluids, completely encasing said mattress, cushion, seating pad or similar support structure;

a passageway means to allow and control the ingress and egress of a gas or other fluid into or out of said vacant regions, within or around the support structure encased by said bladder or membrane.

13. (withdrawn) A method for reducing the possibility of development of deleterious body lesions in a human body under conditions of continued bed confinement by:

placing a mattress, cushion, seating pad or other structure, designed or configured

to minimize localized stress concentrations caused by the weight of the body

thereon, within a bladder or membrane impervious to gases or other fluids;

completely encasing said mattress, cushion, seating pad or other structure; and

varying the fluid pressure in the material as a means of controlling the resiliency of said material to the desire support level.

14. (currently amended) A method for reducing the possibility of development of deleterious body lesions in a human body under conditions of continued bed confinement by;

placing a mattress, cushion, seating pad or other similar support structure, ~~designed~~ or configured to minimize localized stress concentrations caused by the weight of the body thereon, within a bladder or membrane impervious to gases or other fluids;

completely encasing said mattress, cushion, seating pad or other similar support structure,

varying the fluid pressure in the material support structure as a means of controlling the resiliency of said material support structure to the desired support level,

wherein the support structure comprises a mattress containing provisions for reduction of localized stresses in certain portions of the body being supported by the removal of tapered portions of the mattress material in one or more selected regions.

15. (currently amended) A method for reducing the possibility of development of deleterious body lesions in a human body under conditions of continued bed confinement by;

placing a mattress, cushion, seating pad or other similar support structure, ~~designed~~ or configured to minimize localized stress concentrations caused by the weight of the body thereon, within a bladder or membrane impervious to

gases or other fluids;
completely encasing said mattress, cushion, seating pad or other similar support structure,
varying the fluid pressure in the material support structure as a means of controlling the resiliency of said material support structure to the desired support level,
wherein the support structure contains provisions for reduction of localized stresses by the removal of portions of the support structure in one or more selected regions forming a plurality of vacant regions, where said vacant regions are in the shape of an upright truncated cone.

16. (currently amended) A method for reducing the possibility of development of deleterious body lesions in a human body under conditions of continued bed confinement by;

placing a mattress, cushion, seating pad or other similar support structure, designed or configured to minimize localized stress concentrations caused by the weight of the body thereon, within a bladder or membrane impervious to gases or other fluids;
completely encasing said mattress, cushion, seating pad or other similar support structure,
varying the fluid pressure in the material support structure as a means of controlling the resiliency of said material support structure to the desired support level,
wherein the support structure contains provisions for reduction of localized stresses by means of cutting or slicing tapered portions of the mattress material in one or more selected regions.

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17. (withdrawn) A method according to claim 13 wherein the encased material comprises a seat cushion of suitable support material.

18. (currently amended) A method for reducing the possibility of development of deleterious body lesions in a human body under conditions of continued bed confinement by;

placing a mattress, cushion, seating pad or ~~other~~ similar support structure, ~~designed~~
or configured to minimize localized stress concentrations caused by the weight of the body thereon, within a bladder or membrane impervious to gases or other fluids;

completely encasing said mattress, cushion, seating pad or ~~other~~ similar support structure,

varying the fluid pressure in the material support structure as a means of controlling the resiliency of said material support structure to the desired support level, wherein the support structure comprises a seat cushion and said seat cushion contains provisions for localized relief of stress comprising one or more tapered regions where material has been removed selectively from the seat cushion.

19. (currently amended) A method for reducing the possibility of development of deleterious body lesions in a human body under conditions of continued bed confinement by;

placing a mattress, cushion, seating pad or ~~other~~ similar support structure, ~~designed~~
or configured to minimize localized stress concentrations caused by the weight of the body thereon, within a bladder or membrane impervious to gases or other fluids;

completely encasing said mattress, cushion, seating pad or ~~other~~ similar support structure,

varying the fluid pressure in the material support structure as a means of controlling the resiliency of said material support structure to the desired support level, wherein one or more of the edges of the mattress, cushion, or seating pad is undercut such that the edge tapers inward toward the bottom of the mattress, cushion, or seating pad.

20. (withdrawn) A method according to claim 13 wherein said mattress, cushion, or seating pad comprises a plurality of modules, separated from one another and contained within individual fluid-tight membranes or bladders.

21. (currently amended) A method for reducing the possibility of development of deleterious body lesions in a human body under conditions of continued bed confinement by;

placing a mattress, cushion, seating pad or ~~other~~ similar support structure, ~~designed~~
or configured to minimize localized stress concentrations caused by the weight of the body thereon, within a bladder or membrane impervious to gases or other fluids;

completely encasing said mattress, cushion, seating pad or ~~other~~ similar support structure,

varying the fluid pressure in the material support structure as a means of controlling the resiliency of said material support structure to the desired support level, wherein said mattress, cushion, or seating pad is formed from a convoluted foam material.

22. (withdrawn) A method according to claim 13 wherein the encased material comprises a seat cushion.

23. (currently amended) A method for reducing the possibility of development of deleterious body lesions in a human body under conditions of continued bed confinement by;

placing a mattress, cushion, seating pad or ~~other~~ similar support structure, ~~designed~~
or configured to minimize localized stress concentrations caused by the weight of the body thereon, within a bladder or membrane impervious to gases or other fluids;

completely encasing said mattress, cushion, seating pad or ~~other~~ similar support structure,

varying the fluid pressure in the material support structure as a means of controlling the resiliency of said material support structure to the desired support level,

wherein the support structure comprises a seat cushion and wherein said seat cushion contains provisions for localized relief of stress comprising one or more tapered regions where material has been removed or omitted selectively from said seat cushion.

24. (previously presented) The support system of claim 12 further comprising a pressure/vacuum pump to allow continuous variation of the fluid pressure within said bladder or membrane.

25. (previously presented) The support system of claim 12 wherein said bladder or membrane is enclosed by a Ziploc or similar fastening means.